

EPA-453/R-96-010b

**Basis and Purpose Document for the Development
of Final National Emission Standards for Hazardous
Air Pollutants for Off-Site Waste and Recovery
Operations**

U.S. ENVIRONMENT PROTECTION AGENCY

Office of Air and Radiation

Office of Air Quality Planning and Standards

Emission Standards Division

Research Triangle Park, North Carolina 27711

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U.S. ENVIRONMENTAL PROTECTION AGENCY

Basis and Purpose Document for the
Development of Final National Emission
Standards for Hazardous Air Pollutants for
Off-Site Waste and Recovery Operations

Prepared by:

_____/s/_____
1996

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May 24,

(Date)

1. The final standards will reduce air toxic emissions from facilities that receive waste and recoverable materials from off-site for treatment, storage, disposal, recovery, or recycling. At affected facilities, the standards establish control requirements for hazardous air pollutants (HAP) emitted from tanks, surface impoundments, containers, transfer systems, and equipment leaks. These are maximum achievable control technology (MACT) standards, promulgated under the authority of Section 112 of the Clean Air Act.
2. Copies of this document have been sent to the following Federal Departments: Agriculture, Commerce, Defense, Energy, Health and Human Services, Interior, Labor, and Transportation; the Office of Management and Budget; the National Science Foundation; and other interested parties.
3. Copies of this document may be obtained from:

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) is developing National Emission Standards for Hazardous Air Pollutants (NESHAP) under the authority of Section 112 of the Clean Air Act for off-site waste and recovery operations that emit hazardous air pollutants (HAP). The NESHAP applies to specific types of facilities that are determined to be major sources of HAP emissions and receive certain wastes, used oil, and used solvents from off-site locations for storage, treatment, recovery, or disposal at the facility. The rule requires use of maximum achievable control technology (MACT) to reduce HAP emissions from tanks, surface impoundments, containers, oil-water separators, individual drain systems and other material conveyance systems, process vents, and equipment leaks. The purpose of this document is to present the EPA's response to major public comments on the proposed Off-Site Waste and Recovery Operations NESHAP.

The EPA proposed the Off-Site Waste and Recovery Operations NESHAP on October 13, 1994 (refer to 59 FR 51913). A proposed regulatory text for the rule and the background information document (BID) (EPA-453/R-94-070a) that presented information used in the development of the proposed rule was made available to the public for review and comment. A 90-day comment period from October 13, 1994 to January 11, 1995 (an

initial 60 days plus a 30-day extension) was provided to accept written comments from the public on the proposed rule. The opportunity for a public hearing was provided to allow interested persons to present oral comments to the EPA on the rulemaking. However, the EPA did not receive a request for a public hearing, so a public hearing was not held.

The EPA had extensive follow-up discussions with various commenters regarding specific issues initially raised in their written comments that were submitted to the Agency during the comment period. Copies of correspondence and other information exchanged between the EPA and the commenters during the post-comment period are available for public inspection in the docket for the rulemaking.

All of the comments received by the EPA were reviewed and carefully considered by the Agency. Changes to the rule were made when the EPA determined it to be appropriate.

1.1 SUMMARY OF RULE CHANGES SINCE PROPOSAL

The regulatory text that EPA proposed for the Off-Site Waste and Recovery Operations NESHAP included all of the requirements for the rule in a single subpart to be added to 40 CFR part 63. The EPA decided to promulgate the final requirements for the Off-Site Waste and Recovery Operations NESHAP as a series of six new subparts added to 40 CFR part 63. These subparts are Subpart DD – National Emission Standards for Off-Site Waste and Recovery Operations, Subpart OO – National Emission Standards for Tanks - Level 1, Subpart PP – National Emission Standards for Containers, Subpart QQ – National Emission Standards for Surface Impoundments, Subpart RR – National Emission Standards for Individual Drain Systems, and Subpart VV – National Emission Standards for Oil-Water Separators and Organic-Water

Separators. These six subparts are referred to collectively in this document as the "Off-Site Waste and Recovery Operations NESHAP."

The final Off-Site Waste and Recovery Operations NESHAP has been significantly revised in response to comments on the proposed rule. Also, the EPA has made many changes to the specific air emission control requirements in the Off-Site Waste and Recovery Operations NESHAP to clarify the EPA's intent in the application and implementation of these requirements and to make these requirements consistent and up-to-date with EPA decisions made for other related NESHAP and RCRA rules. The substantive changes to the Off-Site Waste and Recovery Operations NESHAP since proposal are summarized below.

1.1.1 Applicability

The applicability of the Off-Site Waste and Recovery Operations NESHAP has been revised to address comments on the proposed rule and to clarify the specific waste management and recovery operations that the EPA intends to be subject to the rule. These changes to the applicability section of the rule include: (1) deleting the proposed term "recoverable material" and defining new terms "off-site material", "used oil", and "used solvent" to explicitly specify the types of materials that the EPA is regulating under the rule; (2) adding a list of the specific wastes and other materials which can be received at a plant site but not considered by the EPA to be off-site materials for the purpose of implementing the rule; and (3) using an inclusive format that limits the rule applicability to six specific types of waste management and recovery operations. A detailed description of each of these changes is presented in the following paragraphs.

The Off-Site Waste and Recovery Operations NESHAP is applicable to owners and operators of a plant site that meet both of the following conditions: (1) the plant site is a major source of HAP emissions as defined in the General Provisions to 40 CFR part 63; and (2) at the plant site, the owner or operator manages "off-site material", as defined in the rule, in one or more of the specific waste management or recovery operations listed in the rule. If either one (or both) of the conditions do not apply to a plant site, then the owner and operator of the plant site is not subject to the Off-Site Waste and Recovery Operations NESHAP and no action is required by the owner or operator in regards to this rule.

For the purpose of implementing the Off-Site Waste and Recovery Operations NESHAP, a "plant site" is all contiguous or adjoining property that is under common control including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof. A unit or group of units within a contiguous property that are not under common control (e.g., a wastewater treatment unit or solvent recovery unit located at the site but is sold to a different company) is a different plant site.

The first applicability condition for the Off-Site Waste and Recovery Operations NESHAP is determined by whether or not the plant site is a major source of HAP emissions as defined in 40 CFR 63.2. In general, this would be a plant site that emits or has the potential to emit considering controls, in total, 10 tons per year or more of any one HAP or 25 tons per year of more of any combination of HAP. If the plant site is an area source, then the owner and operator of the plant site is not subject to the Off-Site Waste and Recovery Operations

NESHAP regardless of the types of materials received at from off-site.

The second applicability condition involves the combined requirement that "off-site material" must be received at the plant site and this material must be managed in one of the six types of waste management or recovery operations specified in the rule. The first part of the applicability condition involves determining whether an "off-site material" as defined in the rule is received at the plant site. The second part of the applicability condition involves determining whether one or more of the following types of waste management or recovery operations is located at the plant site: (1) a hazardous waste treatment, storage, and disposal facility (TSDF) regulated under 40 CFR part 264 or 265 that manages waste received from off-site; (2) a wastewater treatment facility that manages wastewater received from off-site and this facility is exempted from regulation as a TSDF under 40 CFR 264.1(g)(6) or 40 CFR 265.1(c)(10); (3) a wastewater treatment facility other than a publicly-owned treatment works (POTW) that manages wastewaters received from off-site and operation of this facility is the predominant function performed at the plant site; (4) a facility that recycles off-site material and this facility is exempted from regulation as a TSDF under 40 CFR 264.1(g)(2) or 40 CFR 265.1(c)(6); (5) a facility in which used solvents received from off-site are reprocessed or recovered; and (6) a facility in which used oil received from off-site is reprocessed or re-refined and this facility is regulated under 40 CFR 279 subpart F - Standards for Used Oil Processors and Refiners.

For the purpose of implementing the rule, "off-site material" is defined to be a material for which all three of the following criteria apply: (1) the material is a "waste",

"used oil", or "used solvent" as defined in the rule; (2) this material is delivered, transferred, or otherwise moved to the plant site from another location; and (3) this material contains one or more of the specific HAP constituents listed in Table 1 in the rule. If the material received at the plant site does not meet any one (or combination) of these criteria, then the material is not an "off-site material" under the rule.

The term "waste" used for the final Off-Site Waste and Recovery Operations NESHAP is the same definition proposed for the rule. Waste types that EPA does not intend to be regulated under the Off-Site Waste and Recovery Operations NESHAP are specifically listed in the final rule. For the purpose of the implementing the Off-Site Waste and Recovery Operations NESHAP, none of the following wastes are "off-site materials": household waste as defined in 40 CFR 258.2; radioactive mixed waste managed in accordance with all applicable regulations under Atomic Energy Act and Nuclear Waste Policy Act authorities; waste that is generated by remedial activities required under the RCRA corrective action authorities (RCRA sections 3004(u), 3004(v), or 3008(h)), CERCLA authorities, or similar Federal or State authorities; waste containing HAP that is generated by residential households (e.g., old paint, home garden pesticides) and subsequently is collected as a community service by government agencies, businesses, or other organizations for the purpose of promoting the proper disposal of this waste; waste that is generated by or transferred from units complying with all applicable regulations under 40 CFR 63 subparts F and G - National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry; waste containing benzene that is generated by or

transferred from units complying with all applicable requirements specified by § 61.342(b) under 40 CFR 61 subpart FF - National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr; and ship ballast water that is pumped from a ship to an on-shore wastewater treatment facility.

"Used oil" means any oil refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. This definition is consistent with the definition used by the EPA for the RCRA used oil management standards under 40 CFR 279 subpart F.

"Used solvent" means a solvent composed of mixtures of one or more aliphatic hydrocarbons or aromatic hydrocarbons that has been used and as a result of such use is contaminated by physical or chemical impurities.

Based on the applicability conditions for the final Off-Site Waste and Recovery Operations NESHAP, an owner or operator is not subject to the rule and no action is required by the rule for the following cases. If a plant site is not a major source of HAP emissions, then the owner and operator of the plant site are not subject to the Off-Site Waste and Recovery Operations NESHAP regardless of whether the site receives off-site material. If at a plant site is located one or more of the specific waste management or recovery operations listed in the rule but off-site material received at the plant site is not managed in these operations, then the owner and operator of the plant site are not subject to the Off-Site Waste and Recovery Operations NESHAP. In a case when a plant site receives off-site material and is a major source of HAP emissions but there is not one of the waste management

or recovery operations listed in the rule located at the site, then owner and operator of the plant site are not subject to the Off-Site Waste and Recovery Operations NESHAP.

At a plant site subject to the Off-Site Waste and Recovery Operations NESHAP, the rule only applies to the affected sources used to manage off-site material in the waste management and recovery operations specified in the rule that are located at the plant site. Units and equipment used to manage off-site material at the plant site but are not part of one of the waste management or recovery operations specified in the rule are not affected sources under the rule.

The first affected source for the Off-Site Waste and Recovery Operations NESHAP is the group of tanks, surface impoundments, oil-water and organic-water separators, transfer systems, and containers used to manage off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site. The second affected source for the rule is the group of process vents on units in each of the waste management and recovery operations specified in the rule that are located at the plant site. The third affected source for the rule is the group of equipment components consisting of pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, and instrumentation systems that contain or contact off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site.

The compliance date for existing sources subject to the Off-Site Waste and Recovery Operations NESHAP (i.e., affected sources that commenced construction or reconstruction before October 13, 1994) to meet the air emission control

requirements of the rule is beginning 3 years after the rule promulgation date. If management of off-site material in the source is discontinued by this date, then source would no longer subject to the rule. On the other hand, if an existing waste management operation or recovery operation does not presently receive off-site material but begins receiving off-site materials for the first time 3 years after the rule promulgation date (and meets the other applicability conditions in the rule), then the source is a new source subject to the rule. In this case, the owner or operator of the source must achieve compliance with the provisions of the rule upon the first date that the waste management operation or recovery operation begins to manage the off-site material.

Finally, the list of the specific HAP constituents for the Off-Site Waste and Recovery Operations NESHAP (Table 1 in Subpart DD) was revised by the EPA for the final rule. The EPA decided to delete eight chemicals from the proposed list because of the low potential for these chemicals to be emitted from the waste management and recovery operations subject to the rule. The criterion used to characterize and evaluate emission potential was based on a chemical constituent's Henry's law constant. The following chemical compounds were deleted from the proposed list: acrylic acid, aniline, o-cresol, dibutylphthalate, 1,1-dimethylhydrazine, formaldehyde, methyl hydrazine, and n-nitrosodimethylamine.

1.1.2. General Standards

Several major changes have been made to the general standards for the final rule. First, the average VOHAP concentration action level for off-site material required to be managed in the units using air emission controls under the rule has been changed to 500 ppmw (as determined at the point-of-delivery). Units managing off-site materials determined by

the owner or operator to have average VOHAP concentrations that remain less than 500 ppmw are not required to use air emission controls under the rule.

The second change is land disposal units have been deleted as an affected source. The final Off-Site Waste and Recovery Operations NESHAP places no restrictions on the disposal of wastes in land disposal units.

A third change is the addition of an exemption to the general standards in the final Off-Site Waste and Recovery Operations NESHAP that relates to the treatment of the off-site material. This exemption provides that an off-site material management unit is exempted from the air emission control requirements if the off-site material placed in the unit is a hazardous waste that meets the numerical concentration limits, applicable to the hazardous waste, as specified in 40 CFR part 268 - Land Disposal Restrictions under both of the following tables: (1) Table "Treatment Standards for Hazardous Waste" in 40 CFR 268.40, and (2) Table UTS - "Universal Treatment Standards" in 40 CFR 268.48.

1.1.3 Treatment Standards

The final Off-Site Waste and Recovery Operations NESHAP provides owners or operators with a selection of alternative provisions for determining when a treated off-site material is no longer required to be managed in units meeting the air emission control requirements of the rule. The proposed treatment alternatives have been revised where appropriate to reflect the new action level of 500 ppmw and additional alternatives have been added to the rule to provide greater flexibility to the owner or operator in the treatment of off-site materials.

1.1.4 Tank Standards

The tank standards have been revised to address comments on the proposed requirements, to be consistent with tank standards established for related NESHAP source categories, and to reduce the inspection, monitoring, recordkeeping, and reporting requirements. In general, the final Off-Site Waste and Recovery Operations NESHAP establishes two levels of air emission control for tanks managing off-site materials having a maximum HAP vapor pressure less than 76.6 kilopascals [kPa]. The control level applicable to a tank required to use air emission controls is determined by the tank design capacity and the maximum organic HAP vapor pressure of the off-site material in the tank. Different capacity and vapor pressure limits have been established for tanks determined to be part of an existing affected source and those determined to be part of a new affected source. Tanks used for waste stabilization processes regardless of the tank design capacity are required to use Tank Level 2 air emission controls. The designation of which tanks are required to use controls and the required control level for the tank are specified in 40 CFR 63 subpart DD – National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements for Tank Level 1 controls are specified in 40 CFR 63 subpart OO – National Emission Standards for Tanks - Level 1. The specific air emission control requirements for Tank Level 2 controls remain in 40 CFR 63 subpart DD.

The tank capacity limits for existing tanks in which the maximum HAP vapor pressure of the off-site material in the tank is less than 76.6 kPa have been corrected to be consistent with the EPA's original intent to be compatible with other RCRA and NESHAP air emission standards already

promulgated by the Agency which potentially could be applicable to the same tank. The proposed rule was incorrectly drafted to exclude existing tanks having a design capacity less than 75 m³ (approximately 20,000 gallons) from using any air emission controls. The EPA never intended to exclude this group of tanks from the Off-Site Waste and Recovery Operations NESHAP. Under the final rule, when applicable, use of Tank Level 1 air emission controls is required for an existing tank having a design capacity less than 75 m³.

For a tank required to use Tank Level 1 controls, the final rule specifies that the off-site material be managed in a tank using a fixed-roof. For the Tank Level 2 controls, the final rule requires that off-site material be managed in one of the following: (1) a fixed roof tank equipped with an internal floating roof; (2) a tank equipped with an external floating roof; (3) a tank vented through a closed-vent system to a control device; (4) a pressure tank; or (5) a tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device.

1.1.5 Oil-Water Separator Standards

Under the final Off-Site Waste and Recovery Operations NESHAP, individual air emission control requirements have been established for oil-water separator or organic-waster separators (referred to collectively hereafter in this document as "separators"). For each separator required to use controls under the rule, the owner or operator is required to control air emissions from the separator by installing and operating on each section of the unit either a floating roof or a fixed-roof that is vented through a closed-vent system to a control device. The designation of which separators are required to use controls is specified in 40 CFR 63 subpart DD – National Emission Standards for Hazardous Air Pollutants

from Off-Site Waste and Recovery Operations. The specific air emission control requirements are specified in 40 CFR 63 subpart VV – National Emission Standards for Oil-Water and Organic-Water Separators.

1.1.6 Surface Impoundment Standards

Revisions have been made to the surface impoundment standards so that, where relevant and appropriate, the inspection, monitoring, recordkeeping, and reporting requirements for surface impoundments are consistent with the requirements established for tanks and separators. The designation of which surface impoundments are required to use controls is specified in 40 CFR 63 subpart DD – National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements are specified in 40 CFR 63 subpart QQ – National Emission Standards for Surface Impoundments.

1.1.7 Container Standards

The container standards have been significantly revised to address comments on the proposed requirements, to make the Off-Site Waste and Recovery Operations NESHAP rule compatible with the existing U.S. Department of Transportation (DOT) regulations for transporting hazardous materials, and to reduce the inspection, monitoring, recordkeeping, and reporting requirements. The designation of which containers are required to use controls and the required control level for the container are specified in 40 CFR 63 subpart DD – National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements for each control level are specified in 40 CFR 63 subpart PP – National Emission Standards for Containers.

The revised container standards for the Off-Site Waste

and Recovery Operations NESHAP establish three levels of air emission control. The control level applicable to a container is determined by the container design capacity, the organic content of the material in the container, and use of the container. For example, containers with a design capacity less than or equal to 0.1 m^3 (approximately 26 gallons) are not subject to any requirements under the rule.

Under the final rule, Container Level 1 controls are required for the following container categories (except when the container remains uncovered for waste stabilization processes): (1) containers having a design capacity greater than 0.1 m^3 and less than or equal to 0.46 m^3 (approximately 119 gallons); and (2) containers with a design capacity greater than 0.46 m^3 and used to manage off-site materials that do not meet the definition of "light material service" as specified in the rule (i.e., off-site materials for which the vapor pressure of one or more of the components in the material is greater than 0.3 kPa at 20°C , and the total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20 percent by weight). Container Level 2 controls are required for containers with a design capacity greater than 0.46 m^3 and used for "light material service", except when the container remains uncovered for waste stabilization processes. Container Level 3 controls are required for containers having a design capacity greater than 0.1 m^3 that must remain uncovered or continuously vented for waste stabilization processes.

For the containers required to use Container Level 1 controls, the final rule requires that the off-site material be managed either: (1) in a container that meets the relevant DOT regulations on packaging hazardous materials for

transportation under 49 CFR parts 173, 178, 179, and 180;

(2) a covered container that meets the requirements specified in the final rule. No additional requirements are specified by the final rule for containers complying with the applicable DOT regulations. In the case when an owner or operator elects to comply with the covered container requirements (i.e., non-DOT containers), the container must be equipped with a tight-fitting cover that has no visible gaps, spaces, holes, or other openings. The rule does require a visual inspection when the cover is applied and, thereafter, annually if the container remains in on-site storage for a period longer than 1 year. No testing for detectable organic emissions using Method 21 is required. No recordkeeping and reporting are required under the final rule for containers using Container Level 1 controls.

For the containers required to use Container Level 2 controls, the final rule requires that the off-site material be managed in one of the following: (1) a container that meets the relevant DOT regulations on packaging hazardous materials for transportation under 49 CFR parts 173, 178, 179, and 180; or (2) a container that has been demonstrated within the preceding 12 months to operate with no detectable organic emissions by using Method 21; or (3) a container that has been demonstrated within the preceding 12 months to be vapor-tight by using Method 27. No additional requirements are specified by the final rule for containers complying with the applicable DOT regulations. Specific design, operating, inspection and monitoring, repair, recordkeeping, and reporting requirements for containers tested using either Method 21 or 27 are specified in the rule.

For the containers required to use Container Level 3 controls, the final rule requires that an open container be

placed in an enclosure vented through a closed-vent system to a control device or a covered container be vented directly to a control device. If an enclosure is used, the enclosure is to be designed in accordance with the criteria for a permanent total enclosure as specified in 40 CFR 52.741, Appendix B, Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure.

Requirements for loading off-site material into a container have been revised since proposal. Under the final rule there are no requirements for loading off-site material into containers using Container Level 1 controls. For containers using Container Level 2 controls, the loading requirements have been revised to allow flexibility to use any appropriate loading method that will minimize exposure of the off-site material to the atmosphere and thereby reduce organic air emissions, to the extent practical considering the physical properties of the off-site material and good engineering and safety practices. Examples of container loading procedures that the EPA considers to meet these requirements include, but are not limited to, using a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the regulated-material is filled, with subsequent purging of the transfer line before removing it from the container opening.

The inspection, monitoring, recordkeeping, and reporting requirements for containers have been significantly simplified from those proposed. Owners and operators of containers using either Container Level 1 or Container Level 2 controls in accordance with the provisions of the rule are required to

visually inspect the container and its cover and closure devices to check for defects at the time the owner or operator first accepts possession of the container at the facility site with the exception of those containers emptied within 24 hours of being received. Also, in the case when a container used for managing regulated-material remains at the facility site for a period of 1 year or more, the container and its cover and closure devices are to be visually inspected to check for defects at least once every 12 months.

There are no requirements for periodic Method 21 leak monitoring of containers. There are no recordkeeping nor reporting requirements under this final rulemaking for containers using either Container Level 1 or Container Level 2 controls.

1.1.8 Transfer System Standards

The major change to the transfer system standards is the addition of specific requirements for individual drain systems to the final rule. The designation of which individual drain systems are required to use controls is specified in 40 CFR 63 subpart DD – National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. The specific air emission control requirements are specified in 40 CFR 63 subpart RR – National Emission Standards for Individual Drain systems. Other revisions have been made, where relevant and appropriate, so that the requirements for transfer systems other than an individual drain system are consistent with the requirements established for the other types of off-site material management units.

1.1.9 Process Vent Standards

In response to comments, several changes have been made to the air emission control requirements for process vents under the Off-Site Waste and Recovery Operations NESHAP. The

term "enclosed treatment unit" proposed for the rule has been deleted from the final rule and replaced with a definition for the term "process vent." The EPA decided to use this new term to clarify which vents must be connected to a control device under the rule. The final rule has also been revised to require an average emission reduction of at least 95 percent by weight in total HAP emissions from the combination of all affected process vents at the plant site (i.e., all process vents that are a part of the affected sources subject to the Off-Site Waste and Recovery Operations NESHAP).

1.1.10 Equipment Leak Air Standards

The EPA has not included in the final Off-Site Waste and Recovery Operations NESHAP a definition for "ancillary equipment" as was originally proposed. Instead, the specific equipment types subject to equipment leak standards under the Off-Site Waste and Recovery Operations NESHAP are listed directly in the applicability section of the rule (§63.690). These equipment types are consistent with other NESHAP equipment leak standards.

1.1.11 Control Device and Closed-Vent System Standards

Revisions to the control device and closed-vent system standards consist of incorporating changes to the closed-vent system and control device requirements so that these requirements are consistent and up-to-date with the general decisions the EPA has made regarding NESHAP inspection, monitoring, maintenance, repair, malfunctions, recordkeeping, and reporting requirements for organic emission control devices. Also, to improve the readability and user understanding of the requirements, the format used to present the standards has been revised. In the final rule, all of the requirements for a particular type of control device (e.g., vapor incinerator, carbon adsorber, or condenser) are grouped

together.

1.1.12 Test Methods and Procedures

For the final Off-Site Waste and Recovery Operations NESHAP, the EPA decided to allow an owner or operator to use any one of several existing EPA test methods for direct measurement of the VOHAP concentration of an off-site material. In addition, the EPA has made certain other changes to the rule to facilitate the use of organic concentration data obtained using other alternative test methods not specifically listed in the rule.

The final rule allows an owner or operator to directly measure the volatile organic concentration using any one of the following methods: Method 305 in 40 CFR part 63, Appendix A; Method 25D in 40 CFR part 60, Appendix A; or Method 624, Method 1624, or Method 1625 in 40 CFR part 136, Appendix A (when used in accordance with the procedure specified in the rule). In addition, an owner or operator may use any other alternative method that has been validated in accordance with the procedures specified in Sections 5.1 and 5.3 of Method 301 or specified in the 40 CFR part 63 Appendix D - Alternative Validation Procedure for EPA Waste Methods.

1.1.13 Recordkeeping and Reporting

The EPA has changed the recordkeeping and reporting requirements for the final Off-Site Waste and Recovery Operations NESHAP to reflect the revisions to the rule applicability and technical requirements and reduce the burden of these requirements on owners and operators.

1.2 SUMMARY OF IMPACTS

The EPA estimates that implementation of the Off-Site Waste and Recovery Operations NESHAP will reduce HAP emissions

from the source category on a nationwide basis by approximately 82 percent, from 52,000 Mg/yr to 9,000 Mg/yr.

The EPA also estimated the reduction in volatile organic compounds (VOC) emissions from the source category. The Off-Site Waste and Recovery Operations NESHAP is estimated to reduce nationwide VOC emissions by approximately 52,000 Mg/yr. This value was calculated using the estimated nationwide HAP emission value times a value of approximately 1.2 to represent the ratio of VOC-to-HAP constituents in the off-site material regulated under the rule. The value for this ratio was derived from information in the data base for the off-site waste and recovery operations source category. This derived value is lower than VOC-to-HAP ratios indicated for other HAP emission sources. Thus, the procedure used to estimate nationwide VOC emissions for the source category is considered by the EPA to be conservative and may understate the actual quantity of VOC emission reduction that will occur from implementing the Off-Site Waste and Recovery Operations NESHAP.

The EPA prepared estimates of the cost to owners and operators of implementing the requirements of the final Off-Site Waste and Recovery Operations NESHAP at plant sites the EPA expects are likely to be subject to the rule. The total nationwide capital investment cost to purchase and install the air emission controls that are required by the rule is estimated by the EPA to be approximately \$42 million. The total nationwide annual cost of the Off-Site Waste and Recovery Operations NESHAP is estimated to be approximately \$18 million per year. This corresponds to an average cost of approximately \$420 per megagram of HAP controlled.

Price increases in affected markets are projected at less than 0.01 percent of baseline price, and decreases in

production are projected at less than 0.1 percent. No businesses or facilities are projected by the EPA to close as a result of implementing the requirements of the final rule. For more information regarding the economic analysis, consult the Economic Impact Analysis of National Emissions Standards for Hazardous Air Pollutants: Off-Site Waste and Recovery Operations available in the docket (Docket No. A-92-16).

2.0 COMMENTERS ON PROPOSED RULE

The EPA proposed the Off-Site Waste and Recovery Operations NESHAP on October 13, 1994 (59 FR 51913). The preamble to the proposed rule discussed the availability of the proposed regulatory text for the rule and the background information document (BID) (EPA-453/R-94-070a) that presents information used in the development of the proposed rule. Comments from the public on the preamble, proposed regulatory text, and BID were solicited at the time of proposal. A 90-day comment period from October 13, 1994 to January 11, 1995 (an initial 60 days plus a 30-day extension) was provided to accept written comments from the public on the proposed rule. The opportunity for a public hearing was provided to allow interested persons to present oral comments on the rulemaking. However, the EPA did not receive a request for a public hearing, so a public hearing was not held.

A total of 89 comment letters regarding the proposed Off-Site Waste and Recovery Operations NESHAP were received by the EPA. A copy of each comment letter is available for public inspection in the docket for the rulemaking (Docket No. A-92-16). This docket is located at the EPA's Air and Radiation Docket and Information Center, Waterside Mall, room 1500, 1st Floor, 401 M Street, SW, Washington, DC 20460.

The commenters, their affiliations, and the EPA docket number assigned to their correspondence is presented in Table 2-1. Of the comment letters entered into the docket, 15 of the letters are requests for extension of the public comment period, two letters are requests for confirmation that the 30-day extension was granted, one letter is a request for

regulatory text, and one letter is a duplicate entry (docket entries IV-D-34 and IV-D-68). A comment letter for another rulemaking was incorrectly placed in the docket but has been subsequently deleted (docket entry IV-D-69). Consequently, 70 letters were received by the EPA containing specific comments on the proposed Off-Site Waste and Recovery Operations NESHAP. The commenter affiliation distribution for these letters is as follows: 47 individual companies, 14 trade associations, 7 State and local air pollution regulatory agencies (including one from STAPPA/ALAPCO), and 2 Federal agencies.

**TABLE 2-1. LIST OF PUBLIC COMMENTERS ON
PROPOSED OFF-SITE WASTE AND RECOVERY OPERATIONS NESHP**

Docket A-92-16 Entry	Commenter name and address
IV-D-01	Robert L. Collings Morgan, Lewis & Bockius 2000 One Logan Square Philadelphia, PA 19103-6993
IV-D-02	Barbara E. Ritchie Environmental Manager FMC Corporation Lithium Division Highway 161, Box 795 Bessemer City, NC 28016
IV-D-03	David W. Gustafson Air Issues Manager The Dow Chemical Company 2030 Dow Center Midland, MI 48674
IV-D-04	Neil J. King Wilmer, Cutler & Pickering 2445 M Street, NW Washington, DC 20037-1420
IV-D-05	Mark S. Reimer Fort Howard Corporation P.O. Box 19130 Green Bay, WI 54307-9130

Docket A-92-16 Entry	Commenter name and address
IV-D-06	Thomas A. Kovacic, P.E. Senior Air Issues Specialist Dow Corning Corporation Midland, MI 48686-0995
IV-D-07	Hannah Kimball Manager, Envir. Policy & Operations The Boeing Company P.O. Box 3707 Seattle, WA 98124-2207
IV-D-08	Neil Jay King Wilmer, Cutler & Pickering 2445 M Street, SW Washington, DC 20037-1420
IV-D-09	John N. Moore Akin, Gump, Strauss, Hauer & Feld, L.L.P. Attorneys At Law 1333 New Hampshire Avenue, NW Suite 400 Washington, DC 20036
IV-D-10	Doyle R. Pendleton Acting Deputy Director Texas Natural Resource Conservation Commission P.O. Box 13087 Austin, TX 78711-3087

TABLE 2-1. (continued)

Docket A-92-16 Entry	Commenter name and address
IV-D-11	D. E. Park Director, Corporate Environmental Affairs and Process Safety Albemarle Corporation 451 Florida Street Baton Rouge, LA 70801
IV-D-12	Elsie L. Munsell Department of the Navy Deputy Assistant Secretary of the Navy (Installations and Environment) 1000 Navy Pentagon Washington, DC 20350-1000
IV-D-13	Edward C. Graves, P.E. Staff Environmental Engineer Ashland Chemical Company Division of Ashland Oil, Inc. P.O. Box 2219 Columbia, OH 43216
IV-D-14	Bryce E. Harthoorn, QEP Staff Engineer Deere and Company John Deere Road Moline, IL 61265-8098

Docket A-92-16 Entry	Commenter name and address
IV-D-16	Donald J. Patterson, Jr. Beveridge and Diamond, P.C. 1350 I Street, NW, Suite 700 Washington, DC 20005-3311
IV-D-17	David M. Friedland Beveridge and Diamond, P.C. 1350 I Street, NW, Suite 700 Washington, DC 20005-3311
IV-D-18	Michael J. Wax Institute of Clean Air Companies 1707 L Street, NW, Suite 570 Washington, DC 20036-4201
IV-D-19	Dale L. McKinnon Technical Director Manufacturers of Emission Controls Assoc. 1707 L Street, NW, Suite 570 Washington, DC 20036-4201

TABLE 2-1. (continued)

IV-D-15	Terry Hughes Manager, Environmental Engineering & Regulatory Affairs The Mearl Corporation 1057 Lower South Street Peekskill, NY 10566	IV-D-20	Robert P. Strieter Director, Environmental Affairs The Aluminum Association, Inc. 900 19th Street, NW Washington, DC 20006
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TABLE 2-1. (continued)

Docket A-92-16 Entry	Commenter name and address
IV-D-21	Mary E. Ward Counsel-Research and Development RJReynolds Tobacco Company Winston-Salem, NC 27102
IV-D-22	Donald J. Patterson, Jr. Beveridge & Diamond, P.C. 1350 I Street, NW, Suite 700 Washington, DC 20005-3311
IV-D-23	Paul Gerbec, Supervisor Air Toxics Unit Air Quality Division Minnesota Pollution Control Agency 520 Lafayette Road, N St. Paul, MN 55155-4194
IV-D-24	Milton Feldstein Air Pollution Control Officer Bay Area Air Quality Management District 939 Ellis Street San Francisco, CA 94109
IV-D-25	Lawrence L. Bunn Engineering Services Division Department of Health and Envir. Control 2600 Bull Street Columbia, SC 29201

Docket A-92-16 Entry	Commenter name and address
IV-D-26	Walter Quanstrom Amoco Corporation 200 E Randolph Drive P.O. Box 87703 Chicago, IL 60680-0197
IV-D-27	Robin K. Wiener Assistant Counsel/Director of Environmental Compliance Institute of Scrap Recycling Industries, Inc. 1325 G Street, NW, Suite 1000 Washington, DC 20005-3104
IV-D-28	Gail M. Graban Manager Environmental Affairs Ravenswood Aluminum Corporation P.O. Box 98 Ravenswood, WV 26164
IV-D-29	J. Wayne Powell Burroughs Wellcome Co. P.O. Box 1887 Greenville, NC 27835-1887
IV-D-30	M. L. Mullins Vice President-Regulatory Affairs Chemical Manufacturers Association 2501 M Street, NW Washington, DC 20037

TABLE 2-1. (continued)

Docket A-92-16 Entry	Commenter name and address
IV-D-31	Brenda L. Tollett The Valvoline Company A Division of Ashland Oil, Inc. P.O. Box 14000 Lexington, KY 40512
IV-D-32	Lawrence W. Bierlein General Counsel The Association of Container Reconditioners 8401 Corporate Drive, Suite 140 Landover, MD 20785-2224
IV-D-33	Andi S. Kenney and Kurt B. Thaus WMX Technologies, Inc. Government Affairs 1155 Connecticut Ave, NW, Suite 800 Washington, DC 20036
IV-D-34	Robert H. Colby, ALAPCO Donald F. Theiler, STAPPA STAPPA/ALAPCO 444 N Capitol St, NW Washington, DC 20001
IV-D-35	Michael Ray Smith and Catherine R. M. Ehlhardt Eli Lilly and Company Lilly Corporate Center Indiana, IN 46285

Docket A-92-16 Entry	Commenter name and address
IV-D-36	Michael M. Hertel, Chairman Utility Solid Waste Activities Group c/o Edison Electric Institute 701 Pennsylvania Avenue, NW Washington, DC 20004
IV-D-37	Paul C. Bailey, Jr. American Petroleum Institute 1220 L. Street, NW Washington, DC 20005
IV-D-38	Norbert Dee, Ph.D. National Petroleum Refiners Association 1899 L Street, NW, Suite 1000 Washington, DC 20036
IV-D-39	Deborah W. Gates Vice President Ashland Petroleum Company Division of Ashland Oil, Inc. P.O. Box 391 Ashland, KY 41114
IV-D-40	Edgar J. Marston III Executive Vice President Southdown, Inc. 1200 Smith Street, Suite 2400 Houston, TX 77002

TABLE 2-1. (continued)

Docket A-92-16 Entry	Commenter name and address
IV-D-41	Les A. Darling Director, Environmental Affairs Cyprus Amax Minerals Company
IV-D-42	Elizabeth C. Smith Manager, Air Quality Corporate Envir. Quality Reynolds Metals Company P.O. Box 27003 Richmond, VA 23261-7003
IV-D-43	William J. Doyle, Ph.D. Manager, HES Policy & Analysis Marathon Oil Company 539 South Main Street Findlay, OH 45840-3295
IV-D-44	J. C. Hovious, Assistant Director Environmental Affairs Union Carbide Corporation Health, Safety & Environment 39 Old Ridgebury Road Danbury, CT 06817-0001
IV-D-45	Robert LaBoube, Director Regulatory Affairs and Special Projects Chemical Waste Management, Inc. 3001 Butterfield Road Oak Brook, IL 60521

Docket A-92-16 Entry	Commenter name and address
IV-D-46	Billie S. Flaherty Manager, Environmental and Administration Beazer East, Inc. 436 Seventh Avenue Pittsburgh, PA 15219
IV-D-47	Norman L. Morrow Exxon Chemical Americas Safety and Environmental Affairs Department P.O. Box 3272 Houston, TX 77253-3272
IV-D-48	Authur Lee Texaco, Inc. P.O. Box 509 Beacon, NY 12508
IV-D-49	Ann Johnston Molten Metal Technology, Inc. 51 Sawyer Road Waltham, MA 02154
IV-D-50	Joseph L. Woolbert, P.E. Engineering Associate Eastman Chemical Company P.O. Box 7444 Longview, TX 75607-7444

TABLE 2-1. (continued)

Docket A-92-16 Entry	Commenter name and address
IV-D-51	Catherine McCord Safety-Kleen 1000 N Randall Road Elgin, IL 60123-7857
IV-D-52	J. E. Cooper Director Environmental Quality AlliedSignal, Inc. P.O. Box 1139 Morristown, NJ 07962-1139
IV-D-53	Walter R. Quanstrom Amoco Corporation 200 E Randolph Drive Chicago, IL 60680-0703
IV-D-54	Scott Kuhn Corp. Compliance Communications Manager Laidlaw Environmental Services, Inc. Post Office Box 210799 Columbia, SC 29221
IV-D-55	Charles D. Malloch Monsanto Company 800 N Lindergh Boulevard St. Louis, MO 63167

Docket A-92-16 Entry	Commenter name and address
IV-D-56	David Copeland Occidental Chemical Corporation 360 Rainbow Blvd S Niagara Falls, NY 14302-0728
IV-D-57	D. Sean White Industrial Service Corporation P.O. Box 3249 Shawnee, KS 66203
IV-D-58	D. W. Gustafson and Toby A. Threet The Dow Chemical Company 2030 Dow Center Midland, MI 48674
IV-D-59	P. T. Cavanaugh The Chevron Companies 1401 Eye Street, NW, Suite 1200 Washington, DC 20005
IV-D-60	Jonathan Greenberg Browning-Ferris Industries 1350 Connecticut Avenue NW, Suite 1101 Washington, DC 20036

TABLE 2-1. (continued)

Docket A-92-16 Entry	Commenter name and address
IV-D-61	Linda J. Liszewski Manager, Environmental Issues Eastman Kodak Company Rochester, NY 14652-6263
IV-D-62	J. W. Vinzant Kaiser Aluminum 5555 Hilton Avenue, Suite 205 Baton Rouge, LA 70808-2597
IV-D-63	Christopher Goebel National Association of Chemical Recyclers 1200 G Street, NW, Suite 800 Washington, DC 20005
IV-D-64	Lori Wrotenbery, Director Environmental Services Railroad Commission of Texas Oil and Gas Division 1701 N. Congress Austin, TX 78711-2967
IV-D-65	Eli D. Eilbott Environmental Technology Council 915 15th Street, NW - 5th Floor Washington, DC 20005

Docket A-92-16 Entry	Commenter name and address
IV-D-66	Thomas E. Moore Manager, Regulatory Affairs Systech Environmental Corporation 245 N Valley Road Xenia, OH 45385-9354
IV-D-67	Craig S. Campbell Cement Kiln Recycling Coalition 1212 New York Ave, NW, Suite 500 Washington, DC 20005
IV-D-68	Robert H. Colby, ALAPCO Donald F. Theiler, STAPPA STAPPA/ALAPCO 444 N Capitol St, NW Washington, DC 20001
IV-D-69	Deleted from Docket on Jan. 19, 1994, Comment intended for another Docket
IV-D-70	John A. Dege DuPont SHE Excellence Center 1007 Market Street Wilmington, DE 19898

TABLE 2-1. (continued)

Docket A-92-16 Entry	Commenter name and address
IV-D-71	Donald Theiler State of Wisconsin/Department of Natural Resources 101 South Webster Street Madison, WI 53707
IV-D-72	Thomas A. Kovacic, P.E. Dow Corning Corporation Midland, MI 48686-0995
IV-D-73	Richard Moskowitz Institute of Chemical Waste Management 4301 Connecticut Avenue, NW, Suite 300 Washington, DC 20008
IV-D-74	Barry Russell Independent Petroleum Association of Amer. 1101 Sixteenth Street, NW Washington, DC 20036
IV-D-75	Thomas P. Lynch National Tank Truck Carriers, Inc. 2200 Mill Road Alexandria, VA 22314-4677

Docket A-92-16 Entry	Commenter name and address
IV-D-76	Thomas M. Allen, P.E. New York State Dept. of Envir. Conservation 50 Wolf Road Albany, New York 12233-3254
IV-D-77	Rasma I. Zvaners Chemical Manufacturers Association 2501 M Street, NW Washington, DC 20037
IV-D-78	Joanna L. Johnson Harris & Johnson Attorneys 1439 West Babcock Bozeman, MT 59714
IV-D-79	Eli D. Eilbott Environmental Technology Council 915 Fifteenth Street, NW - 5th Floor Washington, DC 20005
IV-D-80	Edmund J. Skernolis WMX Technologies, Inc. 1155 Connecticut Ave, NW, Suite 800 Washington, DC 20036

TABLE 2-1. (continued)

Docket A-92-16 Entry	Commenter name and address
IV-D-81	Scott Kuhn Laidlaw Environmental Services, Inc. 220 Outlet Pointe Blvd. Columbia, SC 29210
IV-D-82	Christopher Goebel National Association of Chemical Recyclers 1200 G. Street, NW, Suite 800 Washington, DC 20005
IV-D-83	Authur Lee and Greg W. Bolner Texaco Environment Health & Safety P.O. Box 509 Beacon, NY 12508
IV-D-84	Edward C. Graves, P.E. Ashland Chemical Company P.O. Box 2219 Columbus, OH 43216
IV-D-85	Paul Bailey American Petroleum Institute 1220 L. Street, NW Washington, DC 20005

Docket A-92-16 Entry	Commenter name and address
IV-D-86	William J. Doyle Marathon Oil Company 539 South Main Street Findlay, OH 45840-3295
IV-D-87	Jonathan Greenberg Browning-Ferris Industries 1350 Connecticut Avenue NW, Suite 1101 Washington, DC 20036
IV-D-88	Robert Trunek ARCO 515 South Flower Street Los Angeles, CA 90071
IV-D-89	Christopher Harris and Joanna L. Johnson National Oil Recyclers Association 1439 West Babcock Bozeman, MT 59715
IV-D-90	Raymond F. Pelletier Department of Energy Washington, DC 20585

3.0 RESPONSE TO COMMENTS ON PROPOSED RULE

3.1 RULE APPLICABILITY

Comment: Many commenters stated that the proposed applicability of the proposed Off-Site Waste and Recovery Operations NESHAP is too broad and should be narrower. Major reasons presented by individual commenters include: (1) rule's applicability was expanded by the EPA beyond the scope of the initial source category listing without providing adequate notice to the public; (2) including operations managing "recoverable materials" received from off-site in the rule's applicability discourages recycling, provides a disincentive to pollution prevention, and is inconsistent with the Pollution Prevention Act; and (3) range of facility types subject to the rule is too broad because many of these facility types have significantly different HAP emission sources. Recommendations suggested by commenters to narrow the rule's applicability include: (1) eliminate the rule's applicability to "recoverable materials"; (2) limit the rule's applicability to the seven industry sectors specifically identified in the proposal preamble and included in the BID impact analysis; (3) limit the rule's applicability to facilities that are "predominantly" in the business of commercial waste management; (4) add more facility-specific exemptions to address the concerns as raised by individual commenters; and

(5) delay development of the NESHAP for the source category until after the NESHAP for other MACT source categories have been promulgated.

Response: The EPA proposed that the Off-Site Waste and Recovery Operations NESHAP be applicable to owners and operators of facilities, with certain specific exceptions, that are "major sources" (as defined in 40 CFR 63.2) and at which operations are conducted to manage, convey, or handle "wastes" or "recoverable materials" generated off-site and containing organic HAP (as specified in Table 1 of the rule). Under the proposed rule, the following waste and recovery operations were specifically exempted from the requirements of the Off-Site Waste and Recovery Operations NESHAP: (1) units used exclusively to manage waste or recoverable material generated at the affected facility site (i.e., waste or recoverable material generated on-site); (2) municipal solid waste landfill units; (3) incinerators used to burn waste; (4) boilers or furnaces used to burn regulated material to produce energy; (5) units at a publicly-owned treatment works; and (6) units used exclusively to manage waste that has been received from remediation activities to cleanup wastes designated as hazardous wastes under RCRA.

The EPA has not expanded the applicability of the Off-Site Waste and Recovery Operations NESHAP beyond the scope of the initial source category listing without providing adequate notice to the public. The EPA published an advance notice of proposed rulemaking (ANPR) in the Federal Register on December 20, 1993 (58 FR 66336) announcing the EPA's intent to develop a NESHAP for the off-site waste and recovery operations source category. In the ANPR, the EPA provided a general description of the types of facilities

the EPA planned to regulate under this rulemaking (see 58 FR 66337). The EPA further provided a definition of "waste" that the Agency intended to be used for this rulemaking which included materials managed prior to being recycled. Thus, the Agency clearly expressed its intent in the ANPR to include recovery operations in the scope of this rulemaking.

The EPA believes that applying the Off-Site Waste and Recovery Operations NESHAP to those organic-containing materials that are collected for subsequent reprocessing or recycling, as defined in the final rule, is fully consistent with the Pollution Prevention Act and the rule neither discourages recycling nor provides a disincentive to pollution prevention. The Pollution Prevention Act of 1990 (42 U.S.C. 13101 et seq., Pub. L. 101-508, November 5, 1990) establishes the national policy of the United States for pollution prevention. This act declares that:

(1) pollution should be prevented or reduced whenever feasible; (2) pollution that cannot be prevented or reduced should be recycled or reused in an environmentally-safe manner wherever feasible; (3) pollution that cannot be recycled or reused should be treated; and (4) disposal or release into the atmosphere should be chosen only as a last resort. For the proposed rule, the EPA split the definition of waste, as expressed in the ANPR, into two terms; "waste" being defined as materials managed prior to being discarded or discharged, and "recoverable materials" being defined as materials managed prior to being recycled, reprocessed, or reused. It appears that commenters interpreted the regulatory language of the proposed rule using these terms to extend the applicability of the rule to types of recycling and pollution prevention operations for which the Agency never intended to be subject to this rulemaking. To

clarify the EPA's intent, the general term "recoverable material" is not used in the final rule. Instead, the EPA has added to the final rule new terms which define the specific types of recycled or reprocessed organic-containing materials subject to the rule. In each case where the final Off-Site Waste and Recovery Operations NESHAP is applicable to a particular operation that recycles or reuses these specified materials, the EPA has included this operation because the Agency has concluded that the operation can be a significant source of organic HAP emissions. The final rule does not prohibit or discourage an owner or operator from continuing to use the recovery operation; the rule only requires that the owner or operator control the organic HAP emitted to the atmosphere from the operation. This is consistent with the Pollution Prevention Act's declaration that operations to recycle or reuse materials be performed in an environmentally-safe manner.

The EPA disagrees that the applicability of the Off-Site Waste and Recovery Operations NESHAP is too broad because many of the facility types have significantly different HAP emission sources. In the Federal Register notice for the proposed rule, the EPA provided examples of specific types of facilities included in the off-site waste and recovery operations source category (see 59 FR 51920). At all of these facilities, similar types of units (e.g., tanks, containers, surface impoundments) are used to manage wastes or the other materials subject to the rule. Organic HAP are emitted from each type of unit by the same emission mechanisms regardless of the type of facility at which the unit is located. Common organic HAP control technologies are applicable to the units used at all of the off-site waste and recovery operations facility types. There are no

significant differences in the organic HAP emissions or the control technologies applicable to controlling these emissions from the off-site waste and recovery operations facility types subject to this rulemaking.

Many commenters wrongly interpreted the regulatory language of the proposed rule to extend the applicability of the Off-Site Waste and Recovery Operations NESHAP to facilities for which the Agency never intended to be subject to this rulemaking. In response to the different interpretation of the proposed rule's applicability by commenters versus the Agency's intent for this rulemaking, the EPA reviewed the regulatory language in the applicability section for the proposed rule. The EPA decided to revise the structure used for the rule applicability section to specifically define each of the facility types that is subject to the Off-Site Waste and Recovery Operations NESHAP. As a result, waste and recovery operations at facilities not explicitly included in the applicability section of the final Off-Site Waste and Recovery NESHAP are not subject to the rule.

At proposal, the EPA identified the types of waste management and recovery operations the Agency was considering for inclusion in the off-site waste and recovery operations source category. In response to public comments on the proposed rule and considering decisions made by the Agency since proposal regarding other related rulemakings, the EPA has reconsidered the types of waste management and recovery operations to be regulated under the Off-Site Waste and Recovery Operations NESHAP. The EPA reviewed information used for the source category impact analysis at proposal and evaluated new information provided to the Agency since proposal by commenters. As a result of this

review, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP should not apply to owners and operators of certain operations originally considered to be in the scope of the rulemaking. The rationale for including or excluding specific waste management or recovery operations in the final rule applicability is presented below.

Facilities where operations are conducted to treat, store, and dispose of wastes determined to be hazardous wastes under RCRA may be subject to organic air emission standards under 40 CFR parts 264 and 265. At these facilities, referred to under the RCRA rules as a hazardous waste treatment, storage, and disposal facility (TSDF), a RCRA hazardous waste may be generated at the same site where a TSDF is located, or may be generated at one site and then transported to a TSDF at a separate location. At TSDF where RCRA hazardous waste is received from off-site, certain types of waste management units such as wastewater treatment tanks and hazardous waste recycling units can be exempted from the air standards specified in 40 CFR parts 264 and 265. Many (but not all) TSDF are expected by the EPA to be located at sites that are major sources of HAP emissions. Therefore, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP be applicable to hazardous waste TSDF as well as to sites where waste or recovery operations managing hazardous waste are performed and the entire operation is exempted under RCRA from the air standards in subparts AA, BB, and CC under 40 CFR parts 264 and 265.

Wastewater treatment facilities are operated by public entities and private companies throughout the United States for the treatment of wastewaters other than those that are RCRA hazardous wastewaters. Publicly owned treatment works

(POTW) are not included in the off-site waste operations source category because POTW are listed as a separate NESHAP source category. A review of nationwide survey data by the EPA indicates that privately-owned wastewater treatment plants are operated at some locations in the United States for which the predominate function performed at the site is to treat wastewaters received from off-site. Although a wastewater may not be a RCRA hazardous waste, this wastewater can still contain significant quantities of HAP. The EPA concluded this group of wastewater treatment plants would not be subject to other NESHAP and would likely include some individual facilities that are major sources of HAP emissions.

Used oils from motor vehicles and other sources can contain HAP. While the management of used oils which are recycled is regulated by separate rules promulgated by the EPA under section 3014 of RCRA, these RCRA rules do not specifically establish air standards for used oil management operations. A major portion of the used oil is processed for sale as fuel for burning in boilers, furnaces, and space heaters. The remainder of the recycled used oil is sent to facilities categorized as "used oil re-refiners." At these facilities the used oil is processed into base lube oil stocks and other products. The EPA determined that some used oil re-refining facilities are likely to be major sources of HAP emissions. Consequently, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP apply to operations that reprocess or re-refine used oil and are subject to regulation under 40 CFR 279 subpart F - Standards for Used Oil Processors and Refiners.

Another recovery operation analogous to used oil re-refining operations is solvent recovery operations.

Organic solvents are used in many types of businesses to clean oils, grease, dirt, or other foreign matter from mechanical parts and like items. These used organic solvents are often collected and reprocessed by a company for re-sale as a product or for use by another company as a process feedstock. The EPA expects that some solvent recovery operations could be major sources of HAP emissions. Therefore, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP be applicable to operations that reprocess or re-refine used solvents except in situations where the operation is not part of a chemical, petroleum, or other manufacturing process that is required to use air emission controls by another subpart of 40 CFR part 63.

Many landfill facilities operated in the United States are used for disposal of waste received from off-site. Municipal solid waste (MSW) landfills are not included in the off-site waste and recovery operations source category because these facilities are listed as a separate NESHAP source category. However, other landfill facilities operate in the United States which are not MSW landfills and accept only nonhazardous wastes. It is the EPA's understanding that landfills used for disposal of construction/demolition debris do not accept wastes containing significant amounts of organic HAP. One commenter submitted to the EPA additional information regarding operations, waste characterizations, and HAP emission estimates from industrial waste landfills. The potential for some industrial waste landfills to be a major source is possible due to special circumstances (e.g., accepting predominately soils contaminated with organics). However, under current operating practices, the EPA concluded that it is unlikely that any of the existing industrial waste landfills

nationwide is a major source of HAP emissions. Therefore, the EPA decided that the final Off-Site Waste and Recovery Operations NESHAP not be applicable to any landfill facilities.

Some wastes generated during oil and gas exploration and production (E&P) are subsequently transferred to operations at other locations for centralized treatment or disposal. At proposal, the EPA identified these centralized treatment and disposal operations as waste management operations that would be subject to the Off-Site Waste and Recovery Operations NESHAP. Additional information was received by the EPA from commenters on the proposed rule regarding the nature of E&P operations as presently practiced in oil and gas production fields. Upon further consideration, the EPA decided it is not necessary to include E&P waste operations under the final Off-Site Waste and Recovery Operations NESHAP. Instead, the EPA is planning to address these sources under the Oil and Gas Production NESHAP currently being developed by the Agency.

Comment: Many commenters stated that the requirements for the proposed Off-Site Waste and Recovery Operations NESHAP overlap with other Clean Air Act and Resource Conservation and Recovery Act (RCRA) air standards and should be eliminated or, at least, minimized to the extent possible. Commenters stated that the proposed rule would be applicable to facilities now (or soon to be) subject to other NESHAP or RCRA air standards. As a result, individual emission points at facilities would be subject to meeting air emission control requirements under multiple Federal air standards. Commenters concluded that this places unnecessary implementation costs on facility owners and

operators and potentially could subject a facility owner or operator to multiple EPA enforcement penalties if a single violation occurs at a facility. Recommendations made by individual commenters to eliminate the rule overlap include: (1) the proposed rule is duplicative of other EPA air standards and therefore is not needed; (2) expand the exemptions under the rule's applicability to include all sources that are addressed by other NESHAP (including source categories for which standards are planned but not yet promulgated) or are already using air emission controls under other existing Federal air standards (e.g., RCRA subpart CC rules); (3) integrate the requirements of RCRA and the Act (i.e., compliance with RCRA air standards should be sufficient for the Act); (4) instead of promulgating a separate rule incorporate the requirements of the proposed rule into the RCRA permit; and (5) add a table to the rule listing, for each emission point, the requirements that the EPA considers the most stringent in cases where multiple EPA air standards apply to a facility (e.g., when are the control requirements for RCRA acceptable, and exactly what additional control or reporting requirements are imposed by the Off-site and Recovery Operations NESHAP).

Response: The EPA fully recognizes that in developing air standards to meet the Congressional directives established by provisions in the Clean Air Act and Resource Conservation and Recovery Act (RCRA), the potential exists for regulatory overlap. However, it is the EPA's intention to minimize, if not eliminate, regulatory overlap to the extent that the Agency is allowed under the different legislative acts. For the Off-Site Waste and Recovery Operations NESHAP, the EPA specifically requested comment regarding how potential regulatory overlap at facilities

subject to the rule as well as other air rules can be addressed (59 FR 51919).

The EPA establishes rules for the management of solid wastes under authority of the RCRA. Under authority of subtitle C of RCRA, the EPA has established rules in 40 CFR parts 260 through 271 regulating the management of solid wastes determined to be hazardous waste. Municipal solid wastes and other types of nonhazardous solid wastes are regulated by rules established under authority of subtitle D of RCRA in 40 CFR Parts 257 and 258.

The Clean Air Act requires that the requirements of rules developed under the Act be consistent, but avoid duplication, with requirements of rules developed under RCRA. The final Off-Site Waste and Recovery Operations NESHAP includes several provisions to ensure that this directive of the Act is met. First, certain types of wastes regulated under RCRA are excluded outright from the definition of "off-site material" used to determine the applicability of the Off-Site Waste and Recovery Operation NESHAP. These wastes include household waste as defined in 40 CFR 258.2; waste that is generated by remedial activities required under the RCRA corrective action authorities (RCRA sections 3004(u), 3004(v), or 3008(h)), CERCLA authorities, or similar Federal or State authorities; and radioactive mixed waste.

The EPA also is aware that at some sites managing hazardous wastes not generated onsite, the owner and operator of a hazardous waste treatment, storage, and disposal facility (TSDF) could be subject to both the Off-Site Waste and Recovery Operations NESHAP and RCRA air rules under subparts AA, BB, and CC of 40 CFR parts 264 and 265. At a particular TSDF, some waste management units may

be required to use air emission controls under one or the other, but not both, the Off-Site Waste and Recovery Operations NESHAP and the RCRA rules. However, some other waste management units could be subject to using air emission controls to comply with both sets of rules. It is unnecessary for owners and operators of those waste management units subject to air standards under both sets of rules to perform duplicative testing and monitoring, keep duplicate sets of records, or perform other duplicative actions. The EPA has decided that the best way to eliminate any regulatory overlap is to amend the RCRA rules to exempt units that are using air emission controls in accordance with the requirements of Off-Site Waste and Recovery Operations NESHAP or any other applicable NESHAP. Providing this exemption eliminates the possibility of duplicative or conflicting requirements for those TSDF tanks, surface impoundments, or containers using organic emission controls in compliance with the Off-Site Waste and Recovery Operations NESHAP but also subject to requirements under the RCRA standards. It is important to note that this exemption only applies to those units using organic air emission controls. A unit that does not use the required air emission controls but is in compliance with a NESHAP through an "emissions averaging" or "bubbling" provision does not qualify for the exemption.

Analogous to the potential for overlap of the Off-Site Waste and Recovery Operations NESHAP with RCRA air rules, owners and operators of sites at which are located waste management and recovery operations that are subject to Off-Site Waste and Recovery Operations NESHAP may also be subject to another NESHAP because of other operations conducted at the site. For example, a waste management or

recovery operation receiving materials from off-site may be located at a synthetic organic chemical manufacturing plant that is subject to 40 CFR 63 subparts F, G, and H - National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (referred to hereafter in this notice as the "HON") or at a petroleum refinery that is subject to 40 CFR 63 subpart CC - National Emission Standards for Organic Hazardous Air Pollutants from Petroleum Refineries. At plants subject to both the Off-Site Waste and Recovery Operations NESHAP and another NESHAP, the Off-Site Waste and Recovery Operations NESHAP applies only to those specific waste management or recovery operations listed in the rule that receive off-site material. The Off-Site Waste and Recovery Operations NESHAP does not apply to other units or equipment components at the site that are not part of the waste management and recovery operations specified in the rule.

Some NESHAP already regulate air emissions from the off-site management of certain wastes containing HAP. To avoid duplication of requirements in these cases, the Off-Site Waste and Recovery Operations NESHAP does not apply to waste management units that either receive waste from units complying with all applicable regulations under the HON, or receive waste from units complying with all applicable requirements specified by § 61.342(b) under 40 CFR 61 subpart FF - National Emission Standards for Benzene Waste Operations for a plant at which the total annual benzene quantity is greater than or equal to 10 Mg/yr.

Comment: Several commenters requested that the EPA define the terms "stationary source", "major source", and "affected source" as used in determining the applicability

of the rule to a facility. Commenters provided a variety of recommendations regarding the definition of these terms.

Response: Section 112 of the Clean Air Act regulates stationary sources of HAP. The term "stationary source" is defined under § 63.2 in 40 CFR 63 subpart A - General Provisions to mean " . . . any building, structure, facility, or installation that emits or may emit any air pollutant." The EPA is directed by the Act section 112 to regulate the emission of these HAP from stationary sources by establishing national emission standards (i.e., NESHAP).

The 1990 amendments to section 112(c) of the Act require the EPA to develop and publish a list of source categories that emit HAP for which NESHAP will be developed. The EPA is required to list all known categories and subcategories of "major sources." The term "major source" is defined by the Clean Air Act to mean "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate 10 tons per year (ton/yr) or more of any HAP or 25 tons/yr or more of any combination of HAP." The EPA's initial list of categories of major sources of HAP emissions was published in the Federal Register on July 16, 1992 (57 FR 31576).

For the purpose of implementing NESHAP under 40 CFR Part 63, "affected source" is defined to mean "the stationary source, or portion of a stationary source that is regulated by a relevant standard or other requirement established pursuant to section 112 of the Act." Each relevant standard is to designate the "affected source" for the purposes of that standard. Within a source category, the EPA decides which HAP emission sources (i.e., emission

points or groupings of emission points) are most appropriate for establishing separate emission standards in the context of the Clean Air Act statutory requirements and the industry operating practices for the particular source category.

At proposal, the EPA considered different options for defining "affected source" for the Off-Site Waste and Recovery Operations NESHAP ranging from using a broad definition (e.g., the entire plant or facility site) to narrow definitions (e.g., individual emission points)(59 FR 51923). The EPA proposed using the narrowest definition of affected source for the Off-Site Waste and Recovery Operations NESHAP by defining the affected sources to be each of the individual emission point types identified for the rule (e.g., each individual tank). The EPA received comments that its proposed designation of affected source for the Off-Site Waste and Recovery Operations NESHAP was too restrictive and would complicate an owner's or operators's determination of when reconstruction of a source has occurred triggering the requirement to comply with the standards for new sources. Upon consideration of these comments, the EPA decided that using a broader definition is a more appropriate approach for defining the affected sources for the Off-Site Waste and Recovery Operations NESHAP.

Designating the affected source for the Off-Site Waste and Recovery Operations NESHAP as the entire plant site was rejected by the EPA. This approach would allow the MACT floor to be established by the plant-wide emission reduction indicative of the level that is achieved by the best performing 12 percent of the existing sources. Application of a single MACT floor to all of the emission points located at the plant site and selected for control under the Off-

Site Waste and Recovery Operations NESHAP would be difficult, if not technically infeasible, for several reasons. First, the EPA's data base for the off-site waste and recovery operations NESHAP lacks sufficient data regarding the type of information required to implement this approach for the source category. Also, the mechanism by which organic HAP are emitted to the atmosphere and the types of controls relevant for reducing these air emissions is not the same for all of the emission point types identified for off-site waste and recovery operation source category. For example, covers frequently are installed on tanks to control air emissions while work practice programs are used to control air emissions from equipment leaks. Furthermore, not all waste management and recovery operations at a particular plant site may be subject to this rulemaking because they are not used to manage off-site material, as defined in the rule.

A second approach is to designate several different affected sources by grouping the similar emission points for each waste management and recovery operation used at the plant site to manage off-site materials. Under this approach, each affected source consists of the group of similar emission point types for the entire sequence of units or equipment components in which a particular off-site material is managed at the site. An example of such a group of emission points is the collection of tanks, containers, surface impoundments, and similar units that are used at a site to manage a waste from the point where the waste is received at the site to the point where the material enters an on-site disposal unit not regulated under this rule (e.g., waste incinerator, landfill unit). An individual MACT floor is established for the entire group of emission

points comprising each designated affected source.

This second approach offers several advantages for implementing the Off-Site Waste and Recovery Operations NESHAP. Designating the affected source to be a group of similar emission point types ensures that air emission controls of equivalent performance are applied at the same time to all of the units used to manage a particular off-site material stream. In contrast, had the EPA maintained the proposed designation for the affected sources (i.e., each individual emission point), situations could have occurred where an owner or operator was required to use controls on a new tank (or other newly installed unit) downstream of existing tanks managing the same off-site material but not required to use air emission controls under the rule. This would be an inefficient application of air emission controls since a significant portion of the HAP contained in the off-site material likely would have escaped to the atmosphere before the material entered the controlled unit. The approach also provides a logical grouping of equipment by which an owner or operator readily can determine when reconstruction of the affected source triggers the air emission control requirements under the rule for new sources. Therefore, for the final off-site waste and recovery operations NESHAP, the EPA decided to designate the affected sources by three distinct groups of the emission point types for the waste management and recovery operation subject to using air emission controls under the rule.

The first group of similar emission points designated to be an affected source for the Off-Site Waste and Recovery Operations NESHAP is the group of tanks, containers, surface impoundments, oil-water and organic-water separators,

individual drain systems and other stationary material conveyance systems used to manage off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site. The units regulated under this affected source designation are collectively referred to hereafter in this notice as "off-site material management units."

The second the group of similar emission points designated to be an affected source for the Off-Site Waste and Recovery Operations NESHAP is process vents on units used to manage off-site material in each of the waste management and recovery operations specified in the rule that are located at the plant site. As defined for the rule, a process vent is an open-ended pipe, stack, or duct used for passage of gases, vapors, or fumes to the atmosphere and this passage is caused by mechanical means (such as compressors or vacuum-producing systems) or by process-related means (such as volatilization produced by heating). A stack or duct used to exhaust combustion products from an enclosed combustion unit (e.g., boiler, furnace, heater, incinerator) is not a process vent for this rulemaking.

The third group of similar emission points designated to be an affected source for the Off-Site Waste and Recovery Operations NESHAP is the group of equipment components prone to emitting HAP as a result of equipment leaks. This group of equipment consists of pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, and instrumentation systems that contain or contact off-site material in each of the waste management and recovery operations specified in the rule that are located at the

plant site.

3.2 IMPACT ANALYSIS

Comment: Several commenters stated that the data base used by the EPA for the impact analysis is incomplete and out-of-date. Specific reasons stated by individual commenters include: (1) the data base is not representative of all of the facilities in the United States affected by the rule (e.g., does not include recovery operations that could be subject to the rule); and (2) the 1986 waste quantity and composition information in the data base used by the EPA is not representative of current waste management practices.

Response: In the development of the Off-Site Waste and Recovery Operations NESHAP, the EPA used the best information available to the Agency. Earlier in the development of the rule, the EPA recognized that more up-to-date data and additional information would be beneficial for evaluating the different types of waste management and recovery operations included in the source category and for estimating the impacts associated with this rulemaking. The EPA made several requests for information from the public to supplement the Agency's information regarding the off-site waste and recovery operations source category.

Prior to proposal of the Off-Site Waste and Recovery NESHAP, the EPA announced in the ANPR the data bases the Agency was using for the impact analyses and requested information from the public (see 58 FR 66338 and 66339). The EPA specifically requested more information on off-site material characteristics (types, quantities, organic composition), operating practices, and waste and recovery operation emission points and air emission data. No

additional information regarding these topics was received by the EPA.

At proposal, the EPA requested additional information to improve the Agency's understanding and profile of the waste management and recovery operations intended to be addressed by this rulemaking (see 59 FR 51921). Additional information was provided to the EPA by commenters regarding the following topics: (1) industrial waste landfill operations, waste characterizations, and HAP emissions; (2) general practices for waste management and recovery operations commonly used at chemical manufacturing plants and petroleum refineries; and (3) general waste management practices used at oil exploration and production leases. In addition, the EPA obtained additional information regarding used solvent collection and management practices for businesses that reprocess used solvent for sale to other users.

The data base used for the impact analysis for the rulemaking was compiled by collecting information related to off-site waste and recovery operations from nationwide surveys of hazardous waste TSDF, wastewater treatment facilities, and used oil management facilities that the EPA conducted for other rulemakings. The EPA is fully aware that off-site waste and recovery operations have changed since the surveys were conducted. These changes are the result of multiple factors including reductions in the quantities of certain wastes sent to waste management facilities as waste minimization programs have been implemented by generators; changes in waste disposal practices to comply with RCRA land disposal restrictions and other rules; and changes in ownership arrangements of waste management and recovery operations located within large

petrochemical and other manufacturing complexes. In recognition of these changes, the EPA adjusted the data base to reflect these changes to the extent possible using other information available to the Agency.

The EPA reviewed the data base used to develop the Off-Site Waste and Recovery Operations NESHAP with respect to the Agency's decisions regarding the rule revisions made to the applicability of the final rule. The EPA believes that the data base contains sufficient information regarding the types of the waste management and recovery operations that are subject to the final Off-Site Waste and Recovery Operations NESHAP to support the Agency's decisions for the rulemaking.

Comment: Several commenters stated that the organic HAP emission reductions estimated by the EPA to be achieved by the proposed rule are overstated. Specific reasons stated by individual commenters include: (1) the emission models selected and the assumptions used to update and consolidate the data used to represent the emission points overestimates the emissions from affected sources; and (2) the analysis did not consider the organic HAP emission reductions from implementation of the RCRA air standards under subpart CC in 40 CFR parts 264 and 265.

Response: The EPA reviewed the assumptions and emission models used to estimate HAP emissions for this source category. The emission models in CHEMDAT8 reflect improvements and revisions that the EPA has made in response to extensive industry review of the models. The Agency not find nor receive any new information from commenters that suggests that the EPA's assumptions and emission models used for the emission estimates are not representative of the

types of off-site waste and recovery operations expected to be subject to the rule.

At certain facilities managing hazardous wastes and also receiving wastes from off-site, air emission control requirements under both the Off-Site Waste and Recovery Operations NESHAP as well as air standards applied under RCRA in 40 CFR parts 264 or 265 may be applicable to the same units at the facilities. The RCRA subpart CC air standards establishes air emission control requirements for certain tanks, surface impoundments, and containers managing hazardous waste. At the time that the impact analysis for the proposed Off-Site Waste and Recovery Operations NESHAP was being prepared, it was not appropriate to include the RCRA subpart CC standards in the regulatory baseline defined for the impact analysis because the subpart CC standards were not promulgated. The RCRA subpart CC standards were subsequently promulgated on December 6, 1994 (59 FR 62896). However, since this date, the EPA has proposed revising certain provisions of the RCRA subpart CC standards. Because the requirements of the RCRA subpart CC standards are likely to change from those promulgated, the EPA decided not to attempt to adjust the nationwide impact estimates to reduce the lower nationwide emission reduction and lower nationwide costs for the Off-Site Waste and Recovery Operations NESHAP if the RCRA subpart CC standards are included in the regulatory baseline.

Comment: Several commenters stated that the EPA's estimates of the costs of implementing the proposed rule requirements are understated. Specific reasons stated by individual commenters include: (1) waste determination analytical costs for complying with the proposed rule

requirements are underestimated; (2) costs of applying air emission controls to bulk solids storage tanks, waste stabilization tanks, and wastewater treatment tanks are underestimated; and (3) costs are not included for modifying RCRA permits when additional controls are required at RCRA permitted facilities and for upgrading containers for "legacy" wastes (i.e., waste generated and stored prior to the effective date of a rule).

Response: The EPA reviewed the cost estimates used for the rule impacts with respect to the Agency's decisions regarding the applicability and technical requirements of the final rule. Based on this review, the EPA concluded that it is reasonable to use cost estimates as prepared at proposal with two revisions for the purpose of evaluating nationwide impacts of the final rule. The first revision involved deleting costs for applying air emission controls to land disposal units because the final Off-Site Waste and Recovery Operations NESHAP places no air emission control requirements on the disposal of wastes in land disposal units. The second revision involves adding costs for performing VOHAP concentration determination for off-site materials not placed in units using air emission controls.

The air emission control requirements for tanks under the final Off-Site Waste and Recovery Operations NESHAP have been significantly revised as described further in section 3.2.4 of this chapter. The EPA reviewed the air emission control cost estimates for tanks considering these revisions to the final rule. With the numerous changes made to the rule air emission control requirements for tanks, the EPA believes that the actual costs of applying air emission controls to the tanks listed in the source category data base will be lower than those estimated at proposal.

Therefore, for the purposes of this rulemaking, the cost algorithms used at proposal for estimating tank air emission controls provide should provide at least reasonable, if not conservative, estimates of applying the required air emission controls to all tanks subject to the rule including bulk solids storage tanks, waste stabilization tanks, and wastewater treatment tanks.

Under the Off-Site Waste and Recovery Operations NESHAP, the need to use air emission controls on containers (or any other affected unit) is determined based on the VOHAP concentration of off-site materials placed in the container 3 years after the promulgation date of the final rule. In situations where an existing container currently holds off-site material (as of the date 3 years from the date of rule promulgation) but no more off-site material is added to the container the Off-Site Waste and Recovery Operations NESHAP does not apply. Thus, there are no costs incurred to retrofit or "upgrade" containers holding "legacy" wastes.

3.3 SELECTION OF BASIS FOR PROPOSED RULE

Comment: A number of commenters stated that the EPA's MACT floor determination for the source category is incorrect or inadequate for a variety of reasons. Reasons presented by individual commenters include: (1) the EPA did not follow the Clean Air Act requirements in developing the MACT floor for this rulemaking; (2) the MACT floor determination did not include recovery operations; (3) the air emission control data used for the MACT floor determination do not represent the controls currently in use at drum reconditioning facilities, oil and gas E&P waste management facilities, or facilities that manage small

quantities of off-site waste; and (4) it is inappropriate for the EPA to group all tanks together in a single emission point category and, instead, separate MACT floor determinations should be performed for tanks managing solid wastes (e.g., bulk storage bins) and for wastewater treatment tanks.

Response: The EPA did follow the requirements the Clean Air Act in developing the MACT floor for this rulemaking. Specific statutory directives set out in section 112 of the 1990 Amendments require the EPA to establish standards under a NESHAP to reflect application of maximum achievable control technology (MACT). A statutory minimum or baseline level of HAP emission control that the EPA can select to be MACT for a particular source category is defined under section 112(d)(3) of the 1990 Amendments, and is referred to as the "MACT floor." For new sources, the MACT floor is the level of HAP emission control that is achieved in practice by the best controlled similar source. The statute allows standards under a NESHAP for existing sources to be less stringent than standards for new sources. The determination of MACT floor for existing sources is dependent on the nationwide number of existing sources within the source category. The off-site waste and recovery operations source category contains more than 30 existing sources nationwide. For a source category with 30 or more existing sources, the MACT floor is the average emission limitation achieved by the best performing 12 percent of the existing sources.

Once the MACT floors are determined for new and existing sources in a source category, the EPA must establish standards under a NESHAP that are no less stringent than the applicable MACT floors. The

Administrator may promulgate standards that are more stringent than the MACT floor when such standards are determined by the EPA to be achievable taking into consideration the cost of implementing the standards as well as any non-air quality health and environmental impacts and energy requirements.

The EPA included in the data base used for the MACT floor determination all of the information available to the Agency. This information reflected air emission control practices used for tanks, containers, and other emission points handling wastes. However, the EPA does not believe the existing air emission control practices used for units handling used oil or used solvent to be less stringent than those applied to units handling wastes.

Drum reconditioning facilities and oil and gas E&P waste management facilities are not subject to the final Off-Site Waste and Recovery Operations NESHAP. Also, under the final rule, facilities that manage small quantities of off-site materials containing organic HAP (less than 1 Mg per year of organic HAP) are not required to install and operate air emission controls. Thus, air emission control practices at these types of facilities should not be included in the MACT floor determination.

As previously discussed in this section, the EPA has revised the affected source designation for the off-site material management units at a plant site subject to the Off-Site Waste and Recovery Operations NESHAP. For the final rule, the designated affected source is the group of off-site material management units (e.g., tanks, surface impoundments, containers, oil-water and organic-water separators, individual drain systems and other stationary transfer systems) in each of the waste management and

recovery operations specified in the rule that are located at the plant site. Because the MACT floor determination for these off-site material management units used at proposal was based on the application of the floor to individual units rather than the group of units, the EPA reconsidered the MACT floor determination following revision of the affected source designation for the rule.

The EPA reviewed site-specific information in the source category data base regarding existing air emission control practices for off-site material management units. In addition, the EPA considered the air emission controls that off-site material management units could be required to use by new air rules promulgated since the Off-Site Waste and Recovery Operations NESHAP was proposed (e.g., air rules for hazardous waste tanks, surface impoundments, and containers in subpart CC under 40 CFR parts 264 and 265).

Based on the EPA's review of the air emission control information in the data base for the off-site waste and recovery operations source category, the Agency concluded that most groups of off-site material management units (significantly more than 12 percent) manage off-site material, at a minimum, in covered units. A portion of these off-site material management units use more effective air emission controls such as venting the covered unit to a control device. However, based on the information available to Agency, the EPA cannot definitively determine whether the higher level of air emission control achieved by that portion of units using controls in addition to covers is representative of the average of the top 12 percent of all existing off-site material management units. Thus, the EPA decided to establish the MACT floor control technology for the existing off-site material managements as use of a

cover.

For other source categories, the EPA has established whether a particular unit warrants the use of air emission controls under rules for the source category on the basis of a characteristic parameter for the materials placed in the unit (e.g., vapor pressure or organic concentration). The EPA believes that using this approach provides an effective and enforceable means for identifying the units that warrant air emission controls while excluding those units for which installation of controls is unnecessary because the units have no or little potential for HAP emissions. Consequently, to complete the definition of the MACT floor for this affected source, an applicability cutoff provision (referred to hereafter in this notice as an "action level") is needed to identify which off-site material management units use the selected air emission controls.

Establishing an action level required first selecting an appropriate format for the action level that allows the value to be relatively simple to determined by an owner or operator and expeditiously checked by EPA or State enforcement personnel. For the proposed rule, the EPA evaluated several possible action level formats and decided that an action level based on the volatile organic HAP concentration (VOHAP) of the off-site materials is appropriate for identifying those units which emit HAP and warrant the application of air emission controls. The selection of the value for the VOHAP concentration action level established for the final Off-Site Waste and Recovery Operations NESHAP is discussed in the response to the next comment.

Comment: Several commenters state that the 100 ppmw

VOHAP concentration action level selected by the EPA for the Off-site Waste and Recovery Operations NESHAP is inappropriate and inconsistent with other applicable NSPS and NESHAP. Individual commenters recommend that the EPA select a higher action level for the rule. Levels suggested by commenters include: (1) 500 ppmw consistent with the proposed SOCFI NSPS; and (2) 1,000 ppmw consistent with the HON.

Response: The EPA proposed a VOHAP concentration value of 100 ppmw to be used as the action level for the rule. However, in proposing this value, the EPA acknowledged that some off-site material management units subject to the Off-Site Waste and Recovery Operations NESHAP could be subject to other NESHAP and NSPS with differing action levels. The EPA therefore requested comment on establishing the VOHAP concentration action level for the rule at 100 ppmw, as well as information that could be used to support alternative action levels such as 500 ppmw (59 FR 51924). The EPA received comments stating that the 100 ppmw VOHAP concentration action level proposed by the EPA for the Off-site Waste and Recovery Operations NESHAP is inappropriate and inconsistent with other applicable NSPS and NESHAP and recommending that the EPA select a higher action level for the rule.

As noted above, the EPA received from commenters several suggestions for higher action levels; although, the commenters provided no technical information to support selection of these higher action levels as the MACT floor. However, in view of the changes the EPA has made to the final Off-site Waste and Recovery Operations NESHAP in areas such as applicability of the rule, the EPA considered it appropriate to reexamine the MACT floor determination and

the selection of the VOHAP concentration action level.

The data available to the EPA at this time for the off-site waste and recovery operations source category are insufficient to perform a rigorous statistical analysis for the purpose of establishing the minimum VOHAP concentration value for off-site material management units currently using air emission controls. From a qualitative perspective, application of air emission controls under the Off-Site Waste and Recovery Operations NESHAP is not needed when a material managed in an uncontrolled unit has little or no potential for HAP emissions. In general, these off-site materials can be characterized as materials having low VOHAP concentrations.

The EPA considered the comments received regarding the proposed action level, other revisions to the final Off-Site Waste and Recovery Operations NESHAP, and changes that the EPA anticipates making for other waste and wastewater related rules. The EPA concluded that a reexamination of the MACT floor action level determination was appropriate. Based on consideration of the information available to the Agency regarding HAP emissions from waste management and recovery operations receiving off-site material, the EPA has concluded that a VOHAP concentration value of 500 ppmw best represents the MACT floor for existing off-site material management units using covers.

3.4 RULE TECHNICAL REQUIREMENTS

Comment: Several commenters stated that air emission controls that would be required by the proposed rule for certain tank types are either technically infeasible, commercially unavailable, impractical, or too costly to implement. Comments stated by individual commenters

include: (1) the vapor pressure and tank size categories should be revised to better relate to tank air emission potential; (2) allow use of "flexible liner tops" as closed covers for tanks; and (3) allow use of conservation vents on tanks using fixed-roof covers; and (4) proposed control requirements are not technically feasible for bulk solids storage tanks and for waste stabilization tanks.

Response: Since proposal, the EPA has obtained more information on the use of tanks to manage off-site materials. Based on consideration of this information, the EPA decided that certain revisions were appropriate to the air emission control requirements for tanks under the final Off-site Waste and Recovery Operations NESHAP. Additional air emission control alternatives have been added for certain types of tanks. The inspection, monitoring, recordkeeping, and reporting requirements for air emission controls applied to all tanks subject to the rule have been significantly simplified from those proposed. The specific revisions are described in detail in Sections 1.1.4 and 1.1.5 of this document. The EPA believes with that, with these revisions, the air emission control requirements under the Off-Site Waste and Recovery Operations NESHAP are technically feasible and practical to implement on all of the tanks types expected to be subject to the rule.

The tank capacity and vapor pressure categories limits for existing tanks required to use air emission controls under the Off-Site Waste and Recovery Operations NESHAP have been corrected to be consistent with the EPA's original intent to be compatible with other RCRA and NESHAP air emission standards already promulgated by the Agency which potentially could be applicable to the same tank. The proposed rule was incorrectly drafted to exclude existing

tanks having a design capacity less than 75 m³ (approximately 20,000 gallons) from using any air emission controls. The EPA never intended to exclude this group of tanks from the Off-Site Waste and Recovery Operations NESHP. Under the final rule, when applicable, use of Tank Level 1 air emission controls is required for an existing tank having a design capacity less than 75 m³.

For the tanks required to use Tank Level 1 controls, the final Off-Site Waste and Recovery Operations NESHP specifies that the off-site material be managed in a tank equipped with a fixed-roof. This roof can be a cover fabricated from a flexible material provided that the cover meets the rule requirements regarding general design criteria (e.g., no visible holes or gaps) and operating requirements (e.g., the cover remains in place except at those times access to the tank is required for the conditions specified in the rule).

Also, the final rule allows a tank using Tank Level 1 controls to be equipped with a conservation vent or similar type of pressure relief device which vents to the atmosphere during normal tank operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. Examples of normal operating conditions that may require these devices to open are during those times when the container internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

Two revisions have been made to the rule regarding tanks used for waste stabilization processes to address comments. First, waste stabilization tanks (as well as any other affected waste management unit) are exempted from the

air emission control requirements of the rule if hazardous waste is placed in the tank and this waste meets the applicable numerical concentration limits specified in 40 CFR part 268 - Land Disposal Restrictions under both of the following tables: Table "Treatment Standards for Hazardous Waste" in 40 CFR 268.40; and Table UTS - "Universal Treatment Standards" in 40 CFR 268.48. Second, for those waste stabilization tanks that are required to use air emission controls under the rule, the final Off-Site Waste and Recovery Operations NESHAP allows a waste stabilization tank to be controlled by locating the tank inside an enclosure vented to an enclosed combustion control device (e.g., vapor incinerator, boiler, process heater). With these revisions to the final rule, the EPA believes that requirements of the Off-Site Waste and Recovery Operations are not only technically feasible but appropriate for waste stabilization tanks used to treat off-site materials and required to use air emission controls under the rule.

The EPA believes that the Tank Level 1 air emission control requirements as specified in the final rule (i.e., a cover with no visible hole or gaps) can be readily applied to those tanks that manage bulk solids and qualify to use Tank Level 1 controls. For those tanks required to use Tank Level 2 controls, the EPA has revised the Off-Site Waste and Recovery Operations NESHAP to address the specific situation raised by commenters regarding the technical feasibility of applying air emission controls to a tank used for bulk feed of off-site material to a waste incinerator. The EPA added to the final rule an air emission control alternative to the Tank Level 2 air emission control requirements for existing incinerator bulk feed tanks. For these tanks, the tank is

exempted from the Tank Level 2 air emission control requirements if all of the following conditions are met:

- (1) the tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR 61 subpart FF - National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year;
- (2) these controls were installed and began operation prior to the rule promulgation date; and
- (3) the enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B.

Finally, at proposal the EPA assumed that if an oil-water or organic-water separator was subject to using air emission controls under the Off-Site Waste and Recovery Operations NESHAP it would be considered a type of tank. As such, this separator would have been required to meet the air emission control requirements specific in the rule for tanks. In actual practice, application of these controls to a separator in strict accordance with the requirements specified in the proposed rule may not be practical given special design and operating characteristics for separators. Therefore, the EPA concluded that it is appropriate to add individual air emission control requirements for oil-water separators and organic-water separators that will provide a level of air emission control comparable to the control level established for tanks yet address the special design and operating features of separators.

Comment: Several comments stated that air emission controls that would be required by the proposed rule for containers are commercially unavailable or impractical to implement. Comments stated by individual commenters include: (1) allow use of vapor-reducing foam and a tarp on containers (especially roll-off boxes); (2) container requirements under the rule should be consistent with the container requirements under the RCRA subpart CC standards.

Response: Since proposal, the EPA has obtained more information on the practices and equipment currently used to manage waste and used solvents in containers. Based on consideration of this information, the EPA decided to revise the air emission control requirements for containers to better reflect the container organic HAP emission potential, the various container types, and the common container management practices used for off-site waste and recovery operations. These revisions are described in detail in Section 1.1.7 of this document.

The EPA believes that the revised requirements are technically feasible and practical to implement on all types of containers that the Agency expects to be subject to the Off-Site Waste and Recovery Operations NESHAP. The air emission control requirements for either Container Level 1 or Container Level 2 controls allow an owner or operator to use a container that meets the relevant U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation under 49 CFR parts 173, 178, 179, and 180. Containers that meet these DOT regulations are readily available from many suppliers. The requirements allow the use of allow use of vapor-reducing foam and a tarp on containers required to use Container Level 1 controls.

The EPA is addressing consistency between the air

emission control requirements for containers (as well as the other affected off-site material management units) in the Off-Site Waste and Recovery Operations NESHAP and the RCRA rules by amending the RCRA rules to include an exemption for those affected units using organic emission controls in accordance with the requirements of the Off-Site Waste and Recovery Operations NESHAP or any other applicable NESHAP.

Comment: Several commenters interpret the proposed requirements in Off-Site Waste and Recovery Operations NESHAP for treatment of wastes prior to being placed in land disposal units to be land disposal restrictions. Specific comments stated by individual commenters include: (1) proposed requirements are inconsistent with RCRA land disposal restrictions; and (2) any solid waste land disposal restrictions should be promulgated by the EPA's Office of Solid Waste (OSW).

Response: The EPA proposed that prior to being placed in land disposal units owners and operators treat regulated materials having a VOHAP concentration equal to or greater than 100 ppmw to remove or destroy organic HAP. Based on the Agency's decisions regarding the rule applicability and considering the existing requirements under RCRA land disposal restrictions, the EPA concluded that the proposed requirement is not need for the Off-Site Waste and Recovery Operations NESHAP. The final rule places no restrictions on the disposal of wastes in land disposal units.

Comment: Several commenters stated that, as proposed, the leak detection and repair (LDAR) standards are duplicative or inconsistent with other EPA LDAR standards that also may be applicable to a unit subject to the rule.

Specific comments stated by individual commenters include: (1) rule should be consistent with HON equipment leak standards (40 CFR 63 subpart H); (2) proposed definition of "ancillary equipment" is inconsistent with the RCRA subpart BB definition and proposed definition of "conveyance systems" includes RCRA ancillary equipment; and (3) "product accumulator vessel" in the definition of "ancillary equipment" is inappropriate.

Response: As discussed in section 3.1, the EPA recognizes that the Off-Site Waste and Recovery Operations NESHAP could be applicable to owners and operators of facilities now (or sometime in the future) subject to other CAA or RCRA air standards. It is the EPA's intention that leak detection and repair (LDAR) standards specified under the Off-Site Waste and Recovery Operations NESHAP not require an owner or operator to perform duplicative activities or inconsistent activities in those cases when standards are applicable to equipment for which the owner or operator is already conducting a LDAR program to comply with another EPA rule.

The EPA proposed that the equipment leak standards under the Off-Site Waste and Recovery Operations would not apply to equipment for which the owner or operator is already complying with the HON equipment leak standards (40 CFR 63 subpart H). This provision remains in the final rule. Thus, in the case when equipment at a synthetic organic chemical manufacturing facility that is subject to a LDAR program under both the Off-site Waste and Recovery Operations NESHAP and the HON, by implementing a LDAR program in accordance with the requirements of 40 CFR 63 subpart H the facility owner or operator is in compliance with Off-Site Waste and Recovery NESHAP.

The EPA reviewed the definitions of "ancillary equipment" proposed for the Off-Site Waste and Recovery Operations NESHAP. Considering the EPA's intention to have consistent requirements for facilities subject to implementing equipment leak standards under more than one rule and the potential for confusion with terminology used for other existing rules, the EPA decided not to include a definition for "ancillary equipment" in the final Off-Site Waste and Recovery Operations NESHAP. Instead, the specific equipment types subject to equipment leak standards under the Off-Site Waste and Recovery Operations NESHAP are listed directly under the rule applicability.

3.5 RULE IMPLEMENTATION REQUIREMENTS

Comment: A number of commenters stated that proposed requirements for determining the average VOHAP concentration of a waste or recovered material either use inappropriate test methods or are impractical and too costly to implement at many facilities potentially subject to the rule. Specific comments stated by individual commenters include: (1) analytical costs for testing wastes will be too high, and will discourage reclamation; (2) requirements are difficult to implement at commercial landfill facilities because of the nature of the facility operations (e.g., wastes received from many sources); (3) requirements for testing wastes in containers are excessive and rule should provide for less frequent testing requirements or exemptions should be provided; (4) rule should provide a criteria for identifying wastes which need to be tested (e.g., use data from material safety data sheets (MODS) or provide exemptions for certain types of waste material, such as glass, paper, cardboard, etc.); (5) Method 305 is not

validated and does not directly relate to potential to emit;
(6) allow use of Method 25D results or TOC measurements;
(7) allow use of results for testing required by the RCRA
LDR; and (8) process knowledge should not need measurement
validation by Method 301.

Response: Under the Off-Site Waste and Recovery
Operations NESHAP, air emission controls are not required
for those off-site material management units located in the
affected source when the unit manages off-site material
having a VOHAP concentration less than the action level. As
part of the procedure for determining the VOHAP
concentration of the off-site material, the EPA proposed
that an owner or operator could use either: (1) direct
measurement using Method 305 of samples of the material
collected in accordance with the procedures specified in the
rule; or (2) the owner's or operator's knowledge of the
VOHAP concentration in material based on information, as
specified in the rule.

For the final Off-Site Waste and Recovery Operations
NESHAP, the EPA decided to add other appropriate test
methods that an owner or operator can choose to use for
direct measurement of the VOHAP concentration of an off-site
material. In addition, the EPA has made certain other
changes to facilitate the use of organic concentration data
obtained using other alternative test methods not
specifically listed in the rule. The EPA believes that the
changes incorporated into waste determination requirements
in conjunction with changes to the applicability and action
level for the final Off-Site Waste and Recovery Operations
NESHAP provide a range of options for determining the VOHAP
concentration of an off-site material such that every owner
and operator of facilities subject to the final rule has

available practical and inexpensive waste determination alternatives.

The EPA developed Method 305 to provide a relative measure of the potential for specific volatile organic compounds to be emitted from waste materials. In developing Method 305, the EPA solicited public comments on a proposed version of the method and addressed these comments in the final version of the method (59 FR 19402). Method 305 has been validated and the EPA considers Method 305 to be an appropriate method for determining the VOHAP concentration of off-site materials subject to the Off-Site Waste and Recovery Operations NESHAP.

Method 305 uses the same waste sample collection procedures and sample recovery conditions established by Method 25D (40 CFR part 60, Appendix A). When using Method 25D, the waste sample is analyzed to determine the total concentration, by weight, of all organics recovered from the waste sample. When using Method 305, the waste sample is analyzed to determine the purged concentration, by weight, of only those specific hazardous air pollutants in the waste sample which are listed in Table 1 in the rule (i.e., the VOHAP concentration). Any hazardous air pollutant or organic constituent that may be contained in the sample but is not listed in Table 1 in the rule is not counted in the VOHAP concentration determination. For the off-site materials typically managed in the operations subject to the Off-Site Waste and Recovery Operations NESHAP, the EPA concluded that using Method 25D is a reasonable alternative to using Method 305 for the purpose of this rulemaking. Therefore, the final Off-Site Waste and Recovery Operations NESHAP includes use of Method 25D as one of the test methods an owner or operator may choose among for direct measurement

of the VOHAP concentration of an off-site material.

Other test methods have been developed by the EPA for use in rulemakings under the Clean Water Act that measure the concentration of organic pollutants in municipal and industrial wastewaters (see Appendix A to 40 CFR part 136). Commenters suggested that certain of these test methods are applicable to EPA air rulemakings affecting wastewater management units. After extensive review, the EPA decided that as alternatives to using Method 305 or Method 25D for direct measurement of VOHAP concentration in an off-site material for the Off-Site Waste and Recovery Operations NESHAP it is appropriate to add Methods 624, 1624, and 1625 (all contained in 40 CFR 136, Appendix A) when used under certain specified conditions. Because these methods measure the total concentration of the HAP constituents listed in Table 1 of the rule, owners and operators may choose to "correct" these measured values to equate to the values that would be measured using Method 305. This is accomplished by multiplying the total concentration measured values times the appropriate " f_m factor" presented in Table 1 of the rule to obtain the Method 305 VOHAP concentration.

Sufficient recovery study results are available for Methods 1624 and 1625 to correct for possible bias, and therefore, these methods are considered adequate by the EPA to characterize the concentration of a off-site material sample. In addition, Method 624 is appropriate provided the initial calibration of the analytical system is performed with the target compounds to be measured. However, none of these methods specifies a sample collection and handling procedure that is considered by the EPA adequate to minimize the volatilization of organics from the sample prior to analysis. Therefore, to ensure that an adequately

representative sample of an off-site material is analyzed by the method, an owner or operator that chooses to use either Method 624, 1624, or 1625 for the Off-Site waste and Recovery Operations NESHAP is required to develop and follow a written sampling plan. This plan describes a step-by-step procedure for collecting representative samples of the off-site materials such that material integrity is maintained and minimal loss of organics from the sample occurs throughout the collection and analysis process. An example of an acceptable sampling plan is one that incorporates sample collection and sample handling procedures similar to those specified in Method 25D. The sampling plan is to be maintained on-site in the facility records.

The EPA proposed use of knowledge-of-the-waste, allowing a facility owner or operator to use test data obtained using a test method other than Method 305 provided that the method was validated in accordance with Method 301 (40 CFR part 63, Appendix A). Under this application of Method 301, the owner or operator would be validating the alternative test method results as compared to test results obtained using Method 305. Since proposal, the EPA decided to allow organic concentration data test that are validated in accordance specifically with Sections 5.1 and 5.3 of Method 301 to be used as direct measurement data. This makes validation of the alternative test method a self-check of the method being validated. Also, if appropriate, owners and operators may choose to "correct" values measured by the alternative test method to equate to the values that would be measured using Method 305 by multiplying the measured values times the appropriate " f_m factor" presented for each hazardous air pollutant listed in Table 1 of the rule.

Finally, the EPA is promulgated a less rigorous

validation procedure, "Alternative Validation Procedure for EPA Waste Methods," in Appendix to 40 CFR part 63 as an alternative to Method 301 for the validation of a test method established by the EPA Office of Water (OW) or the EPA Office of Solid Waste (OSW) when this test method is used for air emission standards. The EPA decided it is appropriate to allow organic concentration data test that are validated in accordance with this method to be used as direct measurement data.

In summary, procedures for determining the VOHAP concentration of a waste or recovered for the purpose of implementing Off-Site Waste and recovery Operations NESHAP have been revised. Under the final rule, air emission controls are not required for those affected units that manage off-site materials having a VOHAP concentration less than 500 ppmw on a mass-weighted average basis as directly measured using any one of the following methods: Method 305 in 40 CFR part 63, Appendix A; Method 25D in 40 CFR part 63, Appendix A; or Method 624, Method 1624, or Method 1625 in 40 CFR part 136, Appendix A (when used in accordance with the procedure specified in the rule). In addition, an owner or operator may use any other alternative method that has been validated in accordance with the procedures specified in Sections 5.1 and 5.3 of Method 301 or specified in "Alternative Validation Procedure for EPA Waste Methods."

Comment: A number of commenters stated that the recordkeeping and reporting requirements of the proposed rule are excessive and inconsistent with other EPA air standards that also may be applicable to a unit subject to the proposed rule. One commenter requests additional recordkeeping and reporting requirements be included in the

final rule. Specific comments stated by individual commenters include: (1) use the HON reporting and recordkeeping requirements; (2) add compliance recordkeeping and reporting requirements for air emission control devices and documentation of operator education; (3) recordkeeping and reporting requirements of the Part 63 general provision are not appropriate for containers; (4) the recordkeeping and reporting requirements are excessive for facilities or units exempted under the rule provisions; (5) schedule for initial notification should be increases to 120 days (rather than 90 days as proposed), and schedule for notification of compliance should be increased to 150 days (rather than 60 days as proposed); and (6) summary report should be submitted semi-annually (not quarterly as proposed).

Response: Under CAA section 114(a), the EPA may require any owner or operator of a source subject to a NESHAP to establish and maintain records as well as prepare and submit notifications and reports to the EPA or authorized State. Review by EPA and State officials of appropriate information that is maintained in facility records and is submitted in facility prepared reports provides one means for checking the compliance status of the facility with the NESHAP technical requirements. However, the EPA also recognizes that excessive and duplicative recordkeeping and reporting requirements can create a burden to facility owners and operators complying with a NESHAP as well as to the EPA and State officials responsible for assuring compliance with the NESHAP. Thus, it is the EPA's intention to limit the amount of recordkeeping and reporting required for a particular NESHAP to reasonable requirements which will provide the appropriate information needed by EPA and State officials to enforce the rule.

For the Off-Site Waste and Recovery Operations NESHAP, the EPA proposed adopting the recordkeeping and reporting requirements as specified in the Part 63 general provisions. Since proposal, as discussed previously in this chapter, the EPA has revised the applicability and technical requirements for the final Off-Site Waste and Recovery Operations NESHAP. The EPA reviewed the recordkeeping and reporting needed for the final rule considering the revisions made since proposal. Based on this review, the EPA decided that certain changes from the recordkeeping and reporting requirements specified in the Part 63 general provisions which will effectively reduce recordkeeping and reporting requirements for the final Off-Site Waste and Recovery Operations NESHAP can be made without compromising the enforceability of the rule.